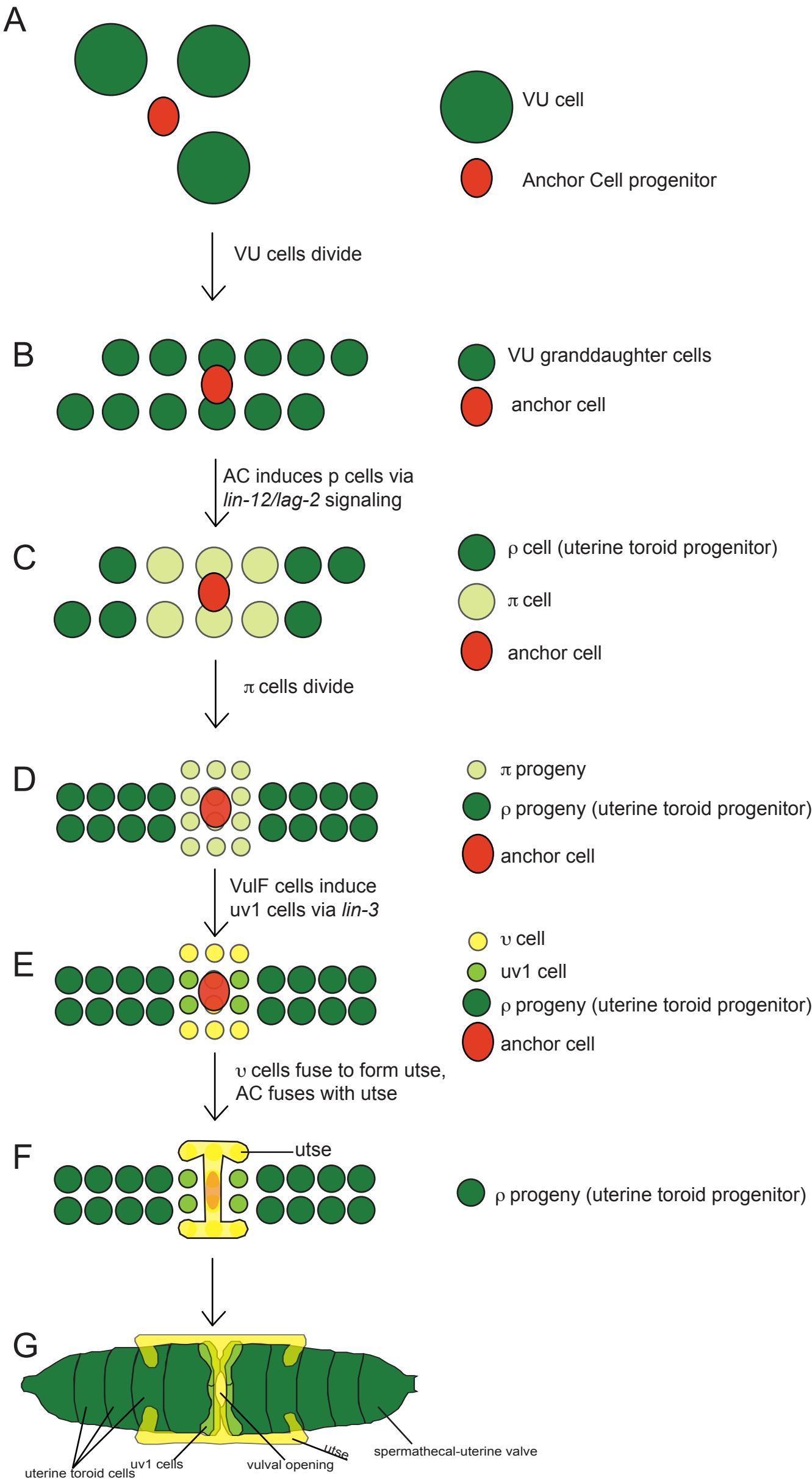


Figure S1 UTSE lineage



### Figure S1: utse lineage

**(A)** L1 larval stage, ventral uterus is composed one anchor cell (AC) precursor (Z1.ppp or Z1.aaa) shown in red, and three remaining ventral uterine (VU) cells (from Z1.ppp, Z1.ppa, Z4.aap and Z4.aaa). **(B)** L3, VU cells divided twice to produce 12 VU granddaughter cells, AC has taken its fate. **(C)** late L3, AC induces surrounding VU granddaughter cells to  $\pi$  cell fate (shown in light green) via lin-12/lag-2 Notch-Delta signaling, remaining dark green cells show  $\rho$  cells which will eventually comprise the uterine toroid cells. **(D)**  $\pi$  cells divide to form 12  $\pi$  daughter cells. **(E)** Vulval VulF cells induce 4  $\pi$  daughter cells to take on uv1 (uterine-vulval 1) (lime green cells) fate, the remaining 8  $\pi$  cells take on  $v$  cell fate (yellow cells). **(F)** early L4,  $v$  cells fuse together to form the utse syncytium, the AC fuses with this syncytium. **(G)** L4 lethargus, hermaphrodite uterus with utse that had undergone full cell outgrowth.